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ABSTRACT OF THE DISCLOSURE

A multi-substrate, microsystem package and a method for assembling same including a high-density flexible connector array are disclosed for use in compact and multi-substrate packages containing circuits, sensors, and actuators in a re-workable and modular approach. The package is designed as a cube with highly flexible connectors providing electrical and fluidic connections between the substrates. The cables are integrated in the inside walls of the cube and make pressure contacts to the pads on stacked substrates. The cables are designed to be flexible and capable of being manipulated so that individual dice can be inserted to populate the cube. Several material candidates for the cables, including polymers such as Parylene, and metal such as gold, are provided.